CALIFORNIA STATE BOARD OF HEALTH.

MONTHLY BULLETIN.

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VITAL STATISTICS FOR AUGUST.

Summary.—A total of 1,134 living births were reported for August from forty-five counties, including fourteen freeholders' charter cities. There were 11 sets of twins, and 10 children were at least the tenth born to their respective mothers.

Altogether 1,067 marriages were reported for August from forty counties. In 809 cases, or 75.8 per cent of all, the marriage performed was the first for each party, both groom and bride being single. In 110 instances it was the first marriage of the groom, but not of the bride, and in 76 it was the first of the bride but not of the groom, while in 72 cases, or 6.8 per cent of all, both parties had been married before. Somewhat more grooms than brides had not been previously married, 86.1 per cent of the grooms, against 82.9 per cent of the brides, being single.

A total of 1,844 deaths, exclusive of stillbirths not tabulated, were reported for August from forty-nine of the fifty-seven counties in the State, including seventy-three cities and incorporated towns. Reports that no deaths occurred in the month were received from one County and twelve City or Town Registrars. The principal causes of death were general diseases (especially other than epidemic diseases), diseases of the circulatory system, of the nervous system, and violence. About one death in seven was due to tuberculosis, though many such decedents were only recent residents of the State. The next most important specific causes of death in August were heart disease, cancer, apoplexy, and pneumonia.

Causes of Death.—The table below shows the number of deaths from the main classes of diseases reported for California in August and July

respectively. For convenience in comparison, the proportion of deaths from each class per 10,000 from all causes is also shown for both months:

Class.	Number.		Proportion per 10,000.	
	August.	July.	August.	July.
ALL CAUSES	1,844	1,211	10,000	10,000
General Diseases	560	297	3,037	2,453
Epidemic diseases	96	67	521	553
Other general diseases	464	230	2,516	1,900
Nervous System	213	144	1,155	1,189
Circulatory System	223	161	1,209	1,330
Respiratory System	129	91	700	751
Digestive System	182	99	987	818
Genito-urinary System	107	63	580	520
Childbirth	10	13	54	107
Skin Diseases	10	1	54	8
Locomotor System	3	1	16	8
Malformations	11	7	60	58
Early Infancy	74	36	401	297
Old Age	77	53	418	438
Violence	194	210	1,052	1,734
Ill-defined Diseases	51	35	277	289

Most of the deaths each month were caused by general diseases other than epidemic diseases, this class including tuberculosis and cancer. Next in order of importance as causes of death are diseases of the circulatory system, of the nervous system, and violence. Following these come diseases of the digestive system, of the respiratory system, and of the genito-urinary system.

The following table gives for August the number of deaths from the leading specific diseases, as well as the proportion per 10,000 from all causes:

Disease.	Number.	Proportion.
ALL CAUSES	1,844	10,000
Tuberculosis	281	1,524
Heart disease	172	933
Cancer	114	618
Apoplexy	90	488
Pneumonia	89	483
Old age	77	418
Bright's disease	75	407
Diarrhea and enteritis	74	401
Congenital debility	44	238
Typhoid fever	43	233
Meningitis	36	195
All others	749	4,062

About one death in seven was due to tuberculosis, and one in eleven to heart disease. One in sixteen was caused by cancer, one in twenty by apoplexy or pneumonia, and one in twenty-five by old age, Bright's disease, or diarrhea and enteritis.

SYNOPSIS OF REGISTRATION LAW.

The main points of interest to the general public in the present law for the registration of vital statistics in California may be summarized as follows:

The County Recorder is the sole Local Registrar for marriages. The Local Registrar of births is the City Health Officer in the few cities having freeholders' charters, and the County Recorder everywhere else.

For deaths, the Local Registrar in cities having freeholders' charters is the City Health Officer; in other cities and incorporated towns, the City or Town Clerk, and for the remainder of each county, the County Recorder. When public convenience requires, the County Recorder as Local Registrar may, with the approval of the State Registrar, appoint Subregistrars for designated portions of the county. Registrars are required to furnish without charge a sufficient number of copies of the proper certificate to each person upon whom is imposed the duty of certifying to a birth, marriage, or death. The chief duty of each Local Registrar and Subregistrar, however, is to enforce the vital-statistics law in his registration district.

The law applies particularly to clergymen, physicians, and undertakers. Every priest, minister of the gospel, justice, or judge who performs a marriage in this State, must within three days after the ceremony file with the County Recorder as Local Registrar a certificate properly filled out for the marriage performed by him.

Every physician, midwife, nurse, or other person assisting at a birth in California, must within five days thereafter file a certificate of birth with the Local Registrar, who is the County Recorder, except in the few cities having freeholders' charters, where the City Health Officer so acts. In case the child is not named when the certificate is filed, the Local Registrar will deliver to the person reporting the birth a supplemental blank for report of the given name, which must be filled out by the parents, next of kin, physician, or midwife, and returned as soon as the child shall be named, the name being then added by the Local Registrar to the certificate previously filed with him.

Every undertaker engaged for a funeral is held responsible for obtaining and filing a certificate of death with the Local Registrar or Subregistrar, and securing a burial or removal permit prior to any disposition of the body. The Local Registrar for deaths is the City Health Officer in cities having freeholders' charters, the City or Town Clerk in other cities and incorporated towns, and the County Recorder for the remainder of each county, while Subregistrars may also be appointed for designated portions of counties. Ordinarily the undertaker will obtain the personal and statistical particulars required over the signature (or name) and address of a relative or friend of the deceased, though the information may be given by any person, including the undertaker or physician, qualified to supply the facts. Besides the personal and statistical particulars, there is also the medical certificate of death, under which heading the physician certifies to the length of time the deceased received medical attendance, and also to the date and cause of death, including both the primary and immediate and the contributory causes, if any, and the duration of each. Special information is also required for hospitals, institutions, transients or recent residents. In all cases where death occurs away from the former or usual residence, that residence must be given, together with the length of time at the place of death, and a statement of where the disease was contracted.

It is a misdemeanor for the State Registrar or for any clergyman, physician, undertaker, or other person, to fail, neglect, or refuse to perform any of the duties imposed upon him under the law for the registration of births, marriages, and deaths. It is also a misdemeanor for any Local Registrar, Deputy Registrar, or Subregistrar to neglect or

fail to enforce the provisions of the registration law in his district. At the instance of the State Registrar, the prosecuting attorney or other proper officer of any county or municipality shall forthwith initiate and promptly follow up the necessary court proceedings against parties responsible for alleged violations of the law.

NOTES TO REGISTRARS.

Promptness in Reporting Births.—The experience of registration officials in other states teaches that the longer the period allowed for reporting births, the smaller is the number actually reported. This explains why the California law requires physicians to register births within five days after they take place. Though at that time the child may not yet have been named, all the other personal and statistical particulars called for on the certificate are then known. The information sought can be obtained from the parents at the time of the birth much more conveniently than afterwards, when the physician's visits have become less frequent or have ceased altogether. While the child's name does not of course affect the statistical tabulations, it is needed for the sake of certainty in the legal records of the birth. The name of the child can be reported to the Registrar on a supplemental blank, filled out by the parents or physician as soon as the child shall have been named, and the Registrar will then add the given name to the certificate previously filed, thus making the record of the birth legally complete.

Complete Registration of Marriages.—This will be insured if the County Clerk, when issuing a marriage license, will also hand a blank certificate of marriage to the parties. They should be directed to furnish the personal and statistical particulars required and leave the certificate with the priest, minister, justice, or judge performing the ceremony. He will then have to fill out the remainder of the certificate and file it with the County Recorder (or Registrar) within three days thereafter. The adoption of this arrangement accounts for the excellence of the returns from several counties.

Definite Statements of Causes of Death.—It often happens that Coroners are required to investigate deaths not caused by violence, but merely occurring without medical attendance. In such cases they should make the investigation thorough enough to be able to certify to some definite cause of death, as tuberculosis, cancer, pneumonia, etc. Deaths reported as due merely to "natural causes" have to be tabulated as "unknown," and therefore yield no information of value to the statistician.

Names and Addresses of Subregistrars.—County Recorders (or Registrars) who have not yet reported to the State Registrar all their appointments of Subregistrars are requested to do so now, in order that the names and addresses may be put on the mailing list for the Monthly Bulletin.

Registrar's Accounts for Fees.—These should be presented to the State Registrar for approval quarterly on the special blanks being sent to Local Registrars in the various counties, cities, and towns.

YELLOW FEVER.

The question is often asked if there is any danger of yellow fever in California. The answer to this must be, that there is danger, although it is not great. Yellow fever is spread by a certain species of mosquito, and that mosquito has never been reported in California. If not here now, it might be brought in ships or cars, and so become naturalized, when we would soon have plenty of them. The mosquito is harmless unless it has bitten a person suffering with yellow fever, so, should the mosquito develop here, no bad results would follow unless a case of yellow fever should be imported and the mosquitoes allowed to bite the patient. Our safety consists, first, in preventing the introduction of mosquitoes and destroying all their breeding-places; second, in keeping all cases of yellow fever protected from mosquitoes. Ships and cars from infected ports are fumigated to destroy the mosquitoes, and a close watch kept for any case of the fever. However, every health officer, physician, and citizen has a duty to perform. We know the cause and can control it by united effort, and can take a valuable lesson from the intense suffering endured and great expense entailed by New Orleans during the past summer. The city was not properly sewered or drained, and had 70,000 cisterns all above ground, many of which were open and therefore breeding-places for mosquitoes. It has been an expensive fight, but one fought on scientific grounds, and science is winning out. Had all the citizens and physicians been prompt in reporting cases and accorded the health authorities an active support, the victory would have been more complete. The hiding of cases in this epidemic, as in all epidemics of contagious diseases everywhere, has been the cause of much of the suffering. Some time people will find that health authorities are working for their good.

MOSQUITOES.

The theory of a few years ago that mosquitoes were the chief active agents in the dissemination of malaria and yellow fever has been scientifically proven to be true. This opens up a new and extensive field for sanitary effort—a field that in the past has been almost entirely neglected. Further investigations will undoubtedly show that other diseases are transmitted by insects, and that the mosquito is not the only guilty one.

Insect life has been looked upon merely as an annoyance to existence—something that while capable of making life miserable was to be dreaded only for its annoyance. This is all changed now. While insects are none the less annoying, we know they spread the germs of disease.

There is now a double incentive to destroy them—to rid ourselves of the terrible nuisance, and of the danger of disease. The spread of yellow fever and malaria is not caused by the same kind of mosquito, but by two separate and distinct species—the *Stegomyia* for yellow fever, and the *Anopheles* for malaria. Neither of these mosquitoes is dangerous unless it has recently bitten a person suffering from the disease it carries; but having bitten such a person, the germs develop in the mosquito and its bite will then give that disease. As far as reported the yellow-fever mosquito has never been found in California, but should it be brought here there is no doubt it would adapt itself to conditions and multiply.

The malaria mosquito is found extensively throughout the State, and its destruction should be sought by all communities. All persons suffering from malaria should be protected from mosquitoes in order to prevent their becoming infected and carrying the disease to others. The following directions are from the Public Health Reports[1], and while given for yellow fever, are as applicable to malaria:

The infection of yellow fever is carried by mosquitoes, and by no other means is the infection spread.

Persons take the disease by being bitten by mosquitoes that have previously bitten a yellow-fever patient.

The mosquitoes to become infected must bite a yellow-fever patient during the first three days of his attack. These first three days, therefore, are the most important time for preventing the access of mosquitoes to a fever patient.

It is often difficult to decide during the first three days whether a patient has yellow fever; hence the necessity in threatened communities of placing a mosquito bar immediately around every patient who has fever of any kind, and for three days at least.

Facts about Screening.—1. The netting used should have meshes fine enough to prevent the passage of mosquitoes (at least 18 to 20 meshes to the inch).

2. It is important to screen the windows and doors of the house. It is doubly important to screen the beds of fever patients.

3. Mosquitoes can bite through mosquito nets when any part of the patient's body is in contact with the netting.

4. Frequent examinations should be made to see that there are no torn places in the netting, or that no mosquitoes have found a lodgment inside.

5. The netting should be well tucked in to keep mosquitoes from entering.

6. If mosquitoes are found within the netting they should be killed inside and not merely driven or shaken out.

7. All cases of fever should be promptly reported to the local health officer. Awaiting his arrival they should be covered with a mosquito bar.

Facts Bearing on Mosquito Destruction.—1. Mosquitoes live in the vicinity in which they breed. They do not often fly a long distance.

2. Mosquitoes breed only in water—usually in artificial collections of fresh water.

3. The young mosquito, or wriggler, lives in water at least seven to twelve days.

4. Although the wrigglers live in water, they must come frequently to the surface to breathe.

5. Coal oil on the surface of the water prevents the wrigglers from breathing.

6. Destroy the breeding-places and you will destroy the mosquitoes.

7. Empty the water from all tubs, buckets, cans, flowerpots, and vases once every forty-eight hours.

8. Fill or drain all pools, ditches, unfilled postholes, and the like.

9. Change regularly every day all water needed in chicken-coops, kennels, etc.

10. Treat with coal oil all standing water which can not be screened or drained (1 ounce of oil will cover 15 square feet of surface). The oil does not affect the water for use if the water is drawn from below.

11. Where oil is applied to standing water it must be distributed evenly over the surface.

12. Put fine wire netting over cisterns, wells, and tanks of water in everyday use.

13. Places in which it is undesirable to put oil, such as watering-troughs for stock, lily ponds, and so forth, can be kept free from wrigglers by putting in gold fish or minnows.

14. Clean away all weeds, grass, and bushes about ditches, ponds, and other possible breeding-places, since these afford a hiding place for the mosquitoes.

15. Clean up vacant lots and back yards of all cans, tins, bottles, and rubbish.

16. First do away with, or treat, all places where mosquitoes are known to breed, and then begin to work on places where they might breed.

17. Inspect and treat with coal oil gutters, culverts, ditches, manholes, catching basins, etc., along the roadside. Manhole covers should be screened.

18. Houses should be cleared of mosquitoes by burning 1 pound of insect powder or 2 pounds of sulphur to 1,000 cubic feet of space. The mosquitoes will fall to the floor and should be collected and burned.

19. Success in mosquito destruction depends upon the coöperation of the members of the entire community.

20. While the infection of yellow fever is carried by a single species of mosquito (the *Stegomyia*), to insure its destruction it is necessary to destroy all mosquitoes.

In places liable to yellow fever both individuals and communities have an effective method of protecting themselves, as indicated above. Use the mosquito bar at once over all cases of fever until the danger from yellow fever has passed. Destroy all mosquitoes.

WALTER WYMAN, Surgeon-General.

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[1] U. S. Public Health and Marine Hospital Service. Public Health Reports, Vol. XX, No. 31, pages 1555–1557. (August 4, 1905.)

NOTIFICATION OF TUBERCULOSIS.

The State Board of Health, in publishing a revised list of reportable diseases, included "tuberculosis of the respiratory tract," believing that the health department of every locality should know where every case of this disease is located. Otherwise they can do little to prevent its spread.

The September number of the California State Journal of Medicine[1] contains the following, which so thoroughly voices our opinion that we reproduce it in full. It should be read by all those suffering with this dread, but preventable, disease, and actively supported by physicians. The italics are ours:

The committee on tuberculosis of the Medical Society of the State of California believes the following represents the most advanced thought upon the subject of notification in pulmonary tuberculosis:

First—Tuberculosis is a disease communicated from one individual to another because of the violation of simple rules of hygiene and sanitation, through either ignorance or willfulness, usually the former.

Second—In order to wage an effective warfare against this disease, the individual suffering from tuberculosis must know that he has the disease, must be instructed as to its nature and as to what measures are necessary to prevent its spread, and must carry them out with care. After removal or death, the apartments previously occupied must be thoroughly cleansed and disinfected.

Third—The supervision of such measures rightfully belongs to the department of health, and in order for this department to have such supervision, it must be able to locate those suffering from the disease, which can only come about by requiring all cases to be reported.

Fourth—The notification of tuberculosis should be especially safeguarded so as not to work unnecessary hardship upon those who are afflicted. Consequently the books containing the record of the names of those suffering from the disease should be open to the inspection of none but the health authorities. This protects not only the patient, but the physician as well, and removes the usual objection urged by physicians against notification. *The purpose of notification is not for quarantine, nor for placarding the house occupied, but simply to insure that proper instructions are given and proper precautions taken.*

Fifth—Special instructions should be printed by the health board. These should be furnished to physicians, who should give them to all patients suffering from tuberculosis. When the physician notifies the department, he should signify whether he will instruct the patient and friends himself as to the methods of preventing the disease, or whether he wishes the department to do this. In this way there would be no meddling with private patients, unless at the physician's request, and consequently there would be no clash between physician and health board. When physicians learn that notification can be carried out without interfering with the liberty of their patients, they feel friendly to the plan. When the public learns that it is done for their protection, and that it entails no hardship, they, too, will take readily to it.

Notification is in harmony with the advanced thought on the prevention of tuberculosis, and will be adopted generally sooner or later, the time depending upon the importance given the subject in the various localities.

F. M. Pottenger.
Jno. C. King.
George L. Cole.
Edward Von Adelung.
George H. Evans.

ANSWER TO REQUEST FOR INFORMATION.

Information has been sought from this office as to the safety of the process of removing, by means of caustic acid, the skin of peaches that were to be canned. It was stated that the California Fruit Canners' Association, at San José, was using this process, and fear expressed that it was deleterious to health. A representative of the State Board of Health visited the cannery and examined the methods used. The fruit is immersed in the hot lye and quickly passed into pure cold water, which is constantly changing, and quickly washes away any alkali. The process is entirely cleanly, the fruit not being handled as it must

[1] California State Journal of Medicine, Vol. III, No. 9, page 294. (September, 1905.)

be when peeled by hand, and we had no hesitation in saying we believed it entirely healthful. However, we took two cans of fruit—one marked No. 38, the other No. 4; one peeled by hand, the other by the lye—and sent them to the State Laboratory for examination. The following is the report:

Neither can showed alkaline juice. The acidity of can No. 38 was 0.32 per cent, calculated in terms of sulphuric acid, while can No. 4 was 0.39 per cent. These figures are only very slightly below, if at all below, the acidity of a ripe peach. We have data for the acidity of some ripe peaches which show 0.5 per cent, which is very little higher than that shown in No. 4. There is nothing harmful in any way in these peaches.

AN ACTIVE BOARD OF HEALTH.

A good example of what an active local board of health can do is that at Woodland. Until July last they had had no board of health for a long time, and, as a result, the sanitary laws were disregarded and the conditions bad. Houses were not connected with sewers, alleys were full of filth, and the streets were far from sanitary. A notice from the State Board of Health caused the appointment of a local board that took seriously to their work and appointed a competent health officer. As a result, houses are being connected with the sewer as fast as possible, the alleys and streets are being cleaned, the filthy Chinatown, which is in the center of the city, is to be reconstructed, and diphtheria, which has for a long time been prevalent in a greater or less degree, is disappearing. The citizens appreciate the efforts of the health officers and are giving them a hearty support, with the result that the city is improving vastly in general appearance. All honor to the physicians and citizens who compose the board, and to the health officer, who, by the way, is a clergyman, doing such good work in the cause of public health.

PUBLIC HEALTH ASSOCIATION.

The September Bulletin will contain the program and other particulars of the meeting of the California Public Health Association, to be held in the latter part of October.